

**IGNITION COIL FOR INTERNAL COMBUSTION ENGINE**

Patent numbers: JP63293908  
Publication date: 1988-11-30  
Inventor: KOUHIRA TAKASHI; others: 01  
Applicant: HITACHI LTD  
Classification:  
- international: H01F31/00  
- european:  
Application numbers: JP19870128208 19870527  
Priority number(s):

**Abstract of JP63293908**

**PURPOSE:** To enhance the reliability and to lengthen a service life by a method wherein constituent components such as a coil part, an iron core and the like are assembled and housed in a thermoplastic synthetic resin case and an appropriate amount of a soft thermoset resin which is transformed into a rubber-like substance after hardening is coated or injected around the iron core so that a stress to be caused between the iron core and an external moulding can be relaxed and absorbed.

**CONSTITUTION:** A wound primary coil 2 is inserted into an inner circumference of a secondary bobbin 2 and is covered in such a way that the bottom of a case 7 fits a primary bobbin 1; furthermore, a high-voltage tower 9 into which high-voltage terminals 8a, 8b are formed collectively by using a thermoplastic synthetic resin is inserted; thus, a coil part 10 is formed. An insulating resin 11 as a thermoset synthetic resin such as an epoxy resin or the like is injected into the coil part 10 and is impregnated; after that, the assembly is heat-treated and hardened. An iron core 14 is inserted into the inner circumference of the primary bobbin 1. Said constituent components are housed in an external case 16 for assembly use composed of the thermoplastic synthetic resin; an appropriate amount of a soft thermoset resin 17 which is transformed into a rubber-like substance after hardening is coated or injected around the iron core. A hard thermoset resin 18 used to fix and protect a whole part is injected into parts excluding said parts and is then hardened.

